What is claimed is:

1. A system comprising:

means for obtaining a parent matrix, N^M, the parent matrix being a first moment matrix of a parent model, the parent matrix having elements, $n^M_{i,j}$, i and j being indices of the parent matrix, the parent matrix having first-row elements, $n^M_{1,j}$, the parent matrix further having diagonal elements $n^M_{j,j}$;

means for obtaining a child matrix, N^S, the child matrix being a first moment matrix of a child model, the child model being a submodel within the parent model, the child matrix having elements, $n^S_{k,l}$, k and l being indices of the child matrix, the child matrix having first-row elements, $n^S_{1,k}$, the child matrix further having diagonal elements, $n^S_{k,k}$;

means for determining an expanded matrix, N^F, the expanded matrix being a first moment matrix of the child model instantiated within the parent model, the means for determining the expanded matrix comprising:

means for calculating a first set of first-row elements, $n^F_{1,j}$, for the expanded matrix, the first set of first row elements being calculated according to:

$$n^F_{1,j} = n^M_{1,j};$$

means for calculating a second set of first-row elements, $n^F_{1,k}$, for the expanded matrix, the second set of first row elements being calculated according to:

$$n^F_{1,k} = n^M_{1,S} n^S_{1,k};$$

means for calculating a first set of diagonal elements, $n^{F}_{j,j}$, for the expanded matrix, the first set of diagonal elements being calculated according to:

$$n^{F}_{j,j} = n^{M}_{j,j}\text{; and}$$

means for calculating a second set of diagonal elements, $n^{F}_{k,k}$, for the expanded matrix, the second set of diagonal elements being calculated according to:

$$n^{F}_{k,k} = n^{S}_{k,k} + \left(n^{M}_{S,S} - 1\right) \cdot n^{S}_{1,k}\,.$$

2. A method comprising the steps of:

obtaining a parent matrix, N^M, the parent matrix being a first moment matrix of a parent model, the parent matrix having elements, $n_{i,j}^M$, i and j being indices of the parent matrix, the parent matrix having first-row elements, $n_{1,j}^M$, the parent matrix further having diagonal elements $n_{j,j}^M$;

obtaining a child matrix, N^S, the child matrix being a first moment matrix of a child model, the child model being a submodel within the parent model, the child matrix having elements, $n_{k,l}^S$, k and l being indices of the child matrix, the child matrix having first-row elements, $n_{1,k}^S$, the child matrix further having diagonal elements, $n_{k,k}^S$; and

determining an expanded matrix, N^F, the expanded matrix being a first moment matrix of the child model instantiated within the parent model, the step of determining the expanded matrix comprising the steps of:

calculating a first set of first-row elements, $n_{1,j}^F$, for the expanded matrix, the first set of first row elements being calculated according to:

$$n_{1,j}^F = n_{1,j}^M;$$

calculating a second set of first-row elements, $n_{1,k}^F$, for the expanded matrix, the second set of first row elements being calculated according to:

$$n_{1,k}^F = n_{1,S}^M n_{1,k}^S;$$

calculating a first set of diagonal elements, $n^F_{j,j}$, for the expanded matrix, the first set of diagonal elements being calculated according to:

$$n^F_{j,j} = n^M_{j,j}\text{; and}$$

calculating a second set of diagonal elements, $n^F_{k,k}$, for the expanded matrix, the second set of diagonal elements being calculated according to:

$$n^F_{k,k} = n^S_{k,k} + \left(n^M_{S,S} - 1\right) \cdot n^S_{1,k}\,.$$

3. In a system having a parent matrix, N^M, and a child matrix, N^S, the parent matrix being a first moment matrix of a parent model, the parent matrix having elements, $n^M_{i,j}$, i and j being indices of the parent matrix, the parent matrix having first-row elements, $n^M_{1,j}$, the parent matrix further having diagonal elements $n^M_{j,j}$, the child matrix being a first moment matrix of a child model, the child model being a submodel within the parent model, the child matrix having elements, $n^S_{k,l}$, k and l being indices of the child matrix, the child matrix having first-row elements, $n^S_{1,k}$, the child matrix further having diagonal elements, $n^S_{k,k}$, a method comprising the steps of:

calculating a first set of first-row elements, $n^F_{1,j}$, for an expanded matrix, the expanded matrix being a first moment matrix of the child model instantiated within the parent model, the first set of first row elements being calculated according to:

$$n^F_{1,j} = n^M_{1,j}\text{;}$$

calculating a second set of first-row elements, $n_{1,k}^{F}$, for the expanded matrix, the second set of first row elements being calculated according to:

$$n_{1,k}^{F} = n_{1,S}^{M} n_{1,k}^{S};$$

calculating a first set of diagonal elements, $n_{j,j}^{F}$, for the expanded matrix, the first set of diagonal elements being calculated according to:

$$n_{j,j}^{F} = n_{j,j}^{M}; \text{ and}$$

calculating a second set of diagonal elements, $n_{k,k}^{F}$, for the expanded matrix, the second set of diagonal elements being calculated according to:

$$n_{k,k}^{F} = n_{k,k}^{S} + \left(n_{S,S}^{M} - 1\right) \cdot n_{1,k}^{S}.$$

4. A method comprising the steps of:

obtaining elements of a parent matrix, N^M, the parent matrix being a first moment matrix of a parent model;

obtaining elements of a child matrix, N^S, the child matrix being a first moment matrix of a child model, the child model being a submodel within the parent model;

determining elements of an expanded matrix, N^F, the expanded matrix being a first moment matrix of a flattened model, the flattened model representing an instantiation of the child model within the parent model, the elements of the expanded matrix being determined as a function of the elements of the parent matrix and the elements of the child matrix.

5. The method of claim 4, wherein the step of obtaining elements of the parent matrix comprises the steps of:

obtaining first-row elements, $n_{1,j}^{M}$, of the parent matrix; and

obtaining diagonal elements, $n_{j,j}^{M}$, of the parent matrix.

6. The method of claim 5, wherein the step of obtaining elements of the child matrix comprises the steps of:

obtaining first-row elements, $n_{1,k}^{S}$, of the child matrix; and

obtaining diagonal elements, $n_{k,k}^{S}$, of the child matrix.

7. The method of claim 6, wherein the step of determining elements of the expanded matrix comprises the step of:

calculating a first set of first-row elements, $n_{1,j}^{F}$, for the expanded matrix, the first set of first row elements being calculated according to:

$$n_{1,j}^{F} = n_{1,j}^{M}.$$

8. The method of claim 6, wherein the step of determining elements of the expanded matrix comprises the step of:

calculating a second set of first-row elements, $n_{1,k}^{F}$, for the expanded matrix, the second set of first row elements being calculated according to:

$$n_{1,k}^{F} = n_{1,S}^{M} n_{1,k}^{S}.$$

9. The method of claim 6, wherein the step of determining elements of the expanded matrix comprises the step of:

calculating a first set of diagonal elements, $n^F_{j,j}$, for the expanded matrix, the first set of diagonal elements being calculated according to:

$$n^F_{j,j} = n^M_{j,j}.$$

10. The method of claim 6, wherein the step of determining elements of the expanded matrix comprises the step of:

calculating a second set of diagonal elements, $n^F_{k,k}$, for the expanded matrix, the second set of diagonal elements being calculated according to:

$$n^F_{k,k} = n^S_{k,k} + \left(n^M_{S,S} - 1\right) \cdot n^S_{1,k}.$$

11. In a system having hierarchically-nested processes, a method comprising the steps of:

obtaining a parent matrix, the parent matrix being a first moment matrix of a parent process, the parent matrix having parent elements;

obtaining a child matrix, the child matrix being a first moment matrix of a child process, the child process being nested within the parent process, the child matrix having child elements; and

calculating elements of an expanded matrix, the expanded matrix being a first moment matrix of a model, the model representing the child model instantiated within the parent model, the elements of the expanded matrix being calculated as a function of the child elements and the parent elements.

12. A system comprising:

logic configured to obtain a parent matrix, the parent matrix being a first moment matrix of a parent process, the parent matrix having parent elements;

logic configured to obtain a child matrix, the child matrix being a first moment matrix of a child process, the child process being nested within the parent process, the child matrix having child elements; and

logic configured to calculate elements of an expanded matrix, the expanded matrix being a first moment matrix of a model, the model representing the child model instantiated within the parent model, the elements of the expanded matrix being calculated as a function of the child elements and the parent elements.

13. In a system having a parent matrix, N^M, and a child matrix, N^S, the parent matrix being a first moment matrix of a parent model, the parent matrix having elements, $n_{i,j}^M$, i and j being indices of the parent matrix, the parent matrix having first-row elements, $n_{1,j}^M$, the parent matrix further having diagonal elements $n_{j,j}^M$, the child matrix being a first moment matrix of a child model, the child model being a submodel within the parent model, the child matrix having elements, $n_{k,l}^S$, k and l being indices of the child matrix, the child matrix having first-row elements, $n_{1,k}^S$, the child matrix further having diagonal elements, $n_{k,k}^S$, a system comprising:

logic configured to calculate a first set of first-row elements, $n_{1,j}^F$, for an expanded matrix, the expanded matrix being a first moment matrix of the child model instantiated within the parent model, the first set of first row elements being calculated according to:

$$n_{1,j}^F = n_{1,j}^M;$$

logic configured to calculate a second set of first-row elements, $n_{1,k}^F$, for the expanded matrix, the second set of first row elements being calculated according to:

$$n_{1,k}^F = n_{1,S}^M n_{1,k}^S;$$

logic configured to calculate a first set of diagonal elements, $n_{j,j}^F$, for the expanded matrix, the first set of diagonal elements being calculated according to:

$$n_{j,j}^F = n_{j,j}^M; \text{ and}$$

logic configured to calculate a second set of diagonal elements, $n^F_{k,k}$, for the expanded matrix, the second set of diagonal elements being calculated according to:

$$n^F_{k,k} = n^S_{k,k} + \left(n^M_{S,S} - 1\right) \cdot n^S_{1,k} .$$

14. A computer-readable medium comprising:

computer-readable code adapted to instruct a programmable device to obtain elements of a parent matrix, N^M, the parent matrix being a first moment matrix of a parent model;

computer-readable code adapted to instruct a programmable device to obtain elements of a child matrix, N^S, the child matrix being a first moment matrix of a child model, the child model being a submodel within the parent model;

computer-readable code adapted to instruct a programmable device to determine elements of an expanded matrix, N^F, the expanded matrix being a first moment matrix of a flattened model, the flattened model representing an instantiation of the child model within the parent model, the elements of the expanded matrix being determined as a function of the elements of the parent matrix and the elements of the child matrix.

15. The computer-readable medium of claim 14, further comprising:

computer-readable code adapted to instruct a programmable device to obtain first-row elements, $n^M_{1,j}$, of the parent matrix; and

computer-readable code adapted to instruct a programmable device to obtain diagonal elements, $n^M_{j,j}$, of the parent matrix.

16. The computer-readable medium of claim 15, further comprising:

computer-readable code adapted to instruct a programmable device to obtain first-row elements, $n_{1,k}^{S}$, of the child matrix; and

computer-readable code adapted to instruct a programmable device to obtain diagonal elements, $n_{k,k}^{S}$, of the child matrix.

17. The computer-readable medium of claim 16, further comprising:

computer-readable code adapted to instruct a programmable device to calculate a first set of first-row elements, $n_{1,j}^{F}$, for the expanded matrix, the first set of first row elements being calculated according to:

$$n_{1,j}^{F} = n_{1,j}^{M}.$$

18. The computer-readable medium of claim 16, further comprising:

computer-readable code adapted to instruct a programmable device to calculate a second set of first-row elements, $n_{1,k}^{F}$, for the expanded matrix, the second set of first row elements being calculated according to:

$$n_{1,k}^{F} = n_{1,S}^{M} n_{1,k}^{S}.$$

19. The computer-readable medium of claim 16, further comprising:

computer-readable code adapted to instruct a programmable device to calculate a first set of diagonal elements, $n^F_{j,j}$, for the expanded matrix, the first set of diagonal elements being calculated according to:

$$n^F_{j,j} = n^M_{j,j}.$$

20. The computer-readable medium of claim 16, further comprising:

computer-readable code adapted to instruct a programmable device to calculate a second set of diagonal elements, $n^F_{k,k}$, for the expanded matrix, the second set of diagonal elements being calculated according to:

$$n^F_{k,k} = n^S_{k,k} + \left(n^M_{S,S} - 1\right) \cdot n^S_{1,k}.$$